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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the Application of:

John Bretscher

Reissue No.:

Filed: April 9, 2004

For: Computer System Architecture and  
Method for Multi-User, Real-Time  
Applications

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**STATUS OF CLAIMS AND SUPPORT FOR CLAIM CHANGES**  
**(37 C.F.R. § 1.73(c))**

Mail Stop Reissue  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sirs:

1. The status of the claims as a result of the amendment submitted herewith is:

Claims cancelled: None

Claims amended:

Claims added: 16-91

2. The support in the disclosure of the patent for the changes made to the claims and for the claims added is as follows:

CLAIMS	SUPPORT
16. A method for processing applications, the method comprising:  providing a front-end server;  providing a plurality of dedicated	Claim 1  Claim 1  Claim 1

<p>processors coupled to the front-end server;</p> <p>selecting an application;</p> <p>transferring the selected application from a memory device to the at least one of the plurality of dedicated processors for execution;</p> <p>initiating communication between a user and the at least one of the dedicated processors so that the user can participate in the execution of the selected application;</p> <p>executing the selected application at the at least one of the dedicated processors; and</p> <p>suspending communication between the user and the front end server.</p>	<p>Claim 1</p> <p>Claim1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p>
<p>17. A method according to claim 16 further comprising:</p> <p>storing a plurality of applications in the memory device, the memory device being coupled to the front-end server; and</p> <p>at the front-end server, generating appropriate communication signals to download the selected application to the at least one of the plurality of dedicated processors.</p>	<p>Claim 2</p> <p>Claim 2</p>

<p>18. A method according to claim 16 further comprising:</p> <p>selecting at least one of the plurality of dedicated processors to execute the selected application.</p>	Claim 1
<p>19. A method according to claim 18 wherein selecting at least one of the plurality of dedicated processors includes polling the plurality of dedicated processors by the front-end server to determine which one of the plurality of dedicated processors is available to execute the selected application before that application is downloaded to the selected dedicated processor.</p>	Claim 4
<p>20. A method according to claim 18 wherein selecting at least one of the plurality of dedicated processors includes the plurality of dedicated processors communicating their status to the front-end server.</p>	Claim 5
<p>21. A method according to claim 16 wherein the plurality of dedicated processors are heterogeneous.</p>	Claim 6
<p>22. A method according to claim 16</p>	

<p>further comprising:</p> <p>initiating communication between at least one additional user and the at least one of the dedicated processors so that the user and the at least one additional user can participate in the execution of the selected application.</p>	Claim 1
<p>23. The method of claim 22 further comprising:</p> <p>providing a voice bridge between the user and the at least one additional user.</p>	Claim 7
<p>24. The method of claim 22 further comprising:</p> <p>providing a voice bridge between the user and the at least one additional user and one or more processors of the plurality of dedicated processors.</p>	Claim 8
<p>25. A method according to claim 16 wherein the selected application is a real-time application.</p>	Claim 1
<p>26. A method according to claim 22 wherein the selected application is a real-time application.</p>	Claim 1
<p>27. A method according to claim 16</p>	Claim 1

wherein the selected application is a real-time game application.	Col. 11, lines 35-39
28. A method according to claim 22 wherein the selected application is a real-time game application.	Claim 1  Col. 11, lines 35-39
29. A method according to claim 25 further comprising:  executing a non-real-time application on the front-end server; and  initiating communication between the user and the front-end server so that the user can participate in the execution of the non-real-time application.	Claim 1  Col. 9 , lines 35-38  Col. 9 , lines 28-38
30. A method for processing real-time applications which may be executed by a plurality of users, the method comprising:  providing a front-end server that has access to a plurality of applications;  providing a plurality of dedicated processors that communicate with the front-end server, the plurality of dedicated processors being inhomogeneous;  receiving a message from at least one	Claim 9  Claim 9  Claim 9  Claim 9

<p>user of the plurality of users to the front-end server that the at least one user desires to have executed a particular application;</p> <p>selecting a dedicated processor that is of the appropriate type and capacity to run the particular application;</p> <p>initiating communication between the plurality of users and the selected dedicated processor; and</p> <p>executing the particular application selected by the at least one user on the selected dedicated processor.</p>	<p>Claim 9</p> <p>Claim 9</p> <p>Claim 9</p>
<p>31. The method of claim 30 further comprising:</p> <p>requesting at the front-end server status information from the plurality of dedicated processors; and</p> <p>receiving the status information at the front-end server.</p>	<p>Claim 10</p> <p>Claim 10</p>
<p>32. The method of claim 30 further comprising:</p> <p>after initiating communication between the plurality of users and the selected dedicated</p>	<p>Claim 11</p>

processor, suspending communication between the plurality of users and the front-end server so that the plurality of users are communicating directly with the selected dedicated processor.	
33. The method of claim 30 wherein initiating communication between the plurality of users and the selected dedicated processor comprises initiating communication between the plurality of users and the selected dedicated processor along a communication path that does not pass through the front-end server.	Claim 1 Figs. 6-9
34. A method for processing applications which may be executed by a plurality of users, the method comprising:  providing a front-end server;  providing a plurality of dedicated processors that communicate with the front-end server and that have access to a plurality of applications, including at least one real-time application;  initiating communication between a first user and the front-end server;	Claim 1  Claim 1 Claim 1  Claim 1





wherein the particular application is a real-time game application.	Col. 11, lines 35-39
39. A method according to claim 34 wherein the front-end server has access to at least one non-real-time application and further comprising executing a non-real-time application on the front-end server.	Col. 9 , lines 35-38
40. A method according to claim 39 further comprising:  initiating communication between the first user and the front-end server so that the first user can participate in the execution of the non-real-time application.	Col. 9 , lines 28-38
41. A method according to claim 34, wherein the front end server determines the status of the dedicated processors.	Claim 10
42. A method according to claim 41, wherein the front end server chooses an available dedicated processor to execute the particular application.	Claim 9, Claim 10
43. A computer system architecture for processing real-time applications, the architecture comprising:	Claim 12

a front-end server;	Claim 12
at least one dedicated processor	Claim 12
coupled to the front-end server ;	
a coupler communicating with the	Claim 12
front-end server, the dedicated processor and a	
plurality of users, wherein one or more users	
communicates with the front-end server to	
select a selected application and the front-end	
server communicates with the plurality of users	
and at least one selected dedicated processor	
executes the selected application, the coupler	
including:	
means for selecting at least one	Claim 12
dedicated processor to execute the	
selected application; and	
means for decoupling a plurality	Claim 12
of users from the front-end server and	
coupling the plurality of users to the at	
least one of the selected dedicated	
processors so that the plurality of users	
is communicating directly with the	
selected dedicated processor so that the	
plurality of users can participate in the	

execution of the selected application.	
44. The computer system of claim 43 further comprising a voice bridge configured to be coupled between one or more users of the plurality of users and the at least one selected dedicated processor.	Claim 13
45. An architecture according to claim 43 further comprising a memory coupled to the front-end server for storing a plurality of applications wherein the front-end server downloads a selected application to at least one dedicated processor.	Claim 14
46. An architecture according to claim 43 further comprising a memory coupled to the at least one dedicated processor.	Claim 15
47. A method for running real-time applications, the method comprising:  providing a front-end server;  providing a dedicated processor;  coupling the front end server with the dedicated processor so that the front-end server may communicate with dedicated processors;  coupling a user to the front-end	Claim 1, Claim 9  Claim 1, Claim 9  Claim 1, Claim 9  Claim 1, Claim 9  Claim 9

<p>server;</p> <p>communicating a selection from a user device of a particular real-time application to the front-end server;</p> <p>executing the particular real-time application on the dedicated processor; and</p> <p>directly coupling the user device to the dedicated processor to allow the user device to participate in the execution of the particular real-time application.</p>	<p>Claim 9</p> <p>Claim 9</p> <p>Claim 1 Figs. 6-9</p>
<p>48. A method for using a computer system in processing an application, the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p>connecting two users via the Internet and via the front-end server to initiate communication with the dedicated processor;</p> <p>and</p> <p>executing a real-time application</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 11, line 4</p> <p>Col. 10, line 39</p> <p>Claim 1</p> <p>Claim 1</p>

program on the dedicated processor to enable the users to communicate voice with each other.	Abstract, line 12
49. The method of claim 48, wherein the step of executing the real-time application program includes facilitating a teleconference with another user.	Col. 8, line 63
50. The method of claim 48, wherein the step of executing the real-time application program includes forming a voice conference and connecting one of the users to the voice conference.	Col. 9, line 43
51. The method of claim 48, wherein the step of executing the real-time application program includes connecting one of the users to an existing voice conference.	Col. 9, line 44
52. The method of claim 48, wherein the step of executing the real-time application program includes forming a voice conference and enabling manipulation of a parameter of the voice conference.	Col. 9, line 45

<p>53. The method of claim 48, wherein the step of executing the real-time application program includes forming a voice conference and enabling movement of one of the users from the voice conference to another voice conference.</p>	Col. 9, line 46
<p>54. The method of claim 48, further including the step of sending the user's voice stream via a telephone network.</p>	Col. 8, line 31; Col. 8, line 65; Fig. 7
<p>55. The method of claim 48, further including the step of sending data with the voice.</p>	Col. 8, line 31
<p>56. A method for using a computer system in processing an application, the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors; and</p> <p>initiating cellular telephone communication from one of a plurality of users</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 10, line 38</p>

to the front end server to enable the dedicated processor to execute the application and facilitate communication between the one user and another of the users.	Abstract, line 12
57. The method of claim 56, wherein the step of initiating includes communicating voice between the one user and another of the users.	Claim 1 Abstract, line 12;
58. The method of claim 56, wherein the step of initiating includes communicating data between the one user and another of the users.	Col. 8, line 31
59. The method of claim 56, wherein the step of initiating includes communicating voice and data between the one user and another of the users.	Col. 8, line 31
60. The method of claim 56, further including the step of: engaging in chat room discussions with the cellular telephone.	Col. 9, line 37; Col. 10, line 38
61. A method for using a computer system in communicating with an application,	

<p>the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p>initiating cellular telephone communication from one of a plurality of users to the front end server to enable one of the dedicated processors to execute the application and communicate with the user.</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 10, line 38</p> <p>Abstract, line 12</p>
<p>62. The method of claim 61, further including the step of accessing the world wide web with the cellular telephone.</p>	<p>Col. 9, line 38; Col. 10, line 38</p>
<p>63. The method of claim 61, further including the step of: communicating via the Internet with the cellular telephone.</p>	<p>Col. 10, line 39; Col. 10, line 38</p>
<p>64. The method of claim 61, wherein the step of initiating is carried out with the</p>	



application program being a game application.	Col. 11, line 37
65. The method of claim 64, wherein the game application includes more than one user.	Col. 11, line 38
<p>66. A method for using a computer system in processing an application, the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p>connecting two users via the Internet and via the front-end server to initiate communication with the dedicated processor;</p> <p>executing a game application program on the dedicated processor to enable the users to play the game with each other while suspending communication between one of the users and the front end server.</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 11, line 4; Col. 10, line 39</p> <p>Claim 1</p> <p>Col. 11, line 37</p> <p>Claim 1</p>

<p>67. A method for using a computer system in processing an application, the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p>connecting two users via the Internet and via the front-end server to initiate communication with the dedicated processor;</p> <p>executing a game application program on more than one of the dedicated processors to enable the users to play the game with each other.</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 11, line 4; Col. 10, line 39</p> <p>Claim 1</p> <p>Col. 11, line 37</p> <p>Col. 11, line 39</p>
<p>68. A method for using a computer system in processing an application, the method including the steps of:</p> <p>providing a front end server;</p> <p>providing a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p>

<p>initiating cellular telephone</p> <p>communication from one of a plurality of users</p> <p>to the front end server to enable one of the</p> <p>dedicated processors to execute a game</p> <p>application program on the dedicated processor</p> <p>to enable the users to play the game with each</p> <p>other.</p>	<p>Col. 10, line 38</p> <p>Abstract, line 12</p> <p>Col. 11, line 37</p>
<p>69. The method of any one of claims</p> <p>56 through 68, wherein one of said steps is</p> <p>carried out with the application program being</p> <p>a real-time application program.</p>	<p>Claim 1</p>
<p>70. A computer system architecture for</p> <p>processing an application, the architecture</p> <p>including:</p> <p>    a front end server;</p> <p>    a plurality of dedicated processors</p> <p>structured so that the front end server can</p> <p>communicate with at least one of the plurality</p> <p>of dedicated processors;</p> <p>    a connection of two users via the</p> <p>Internet and via the front-end server to initiate</p> <p>communication with the dedicated processor;</p>	<p>Claim 12</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 11, line 4</p>

<p>and</p> <p>a real-time application program</p> <p>executing on the dedicated processor to enable</p> <p>the users to communicate voice with each</p> <p>other.</p>	<p>Col. 10, line 39</p> <p>Claim 1</p> <p>Claim 1</p> <p>Abstract, line 12</p>
<p>71. The architecture of claim 70,</p> <p>wherein the real-time application program</p> <p>facilitates a teleconference with another user.</p>	<p>Col. 8, line 63</p>
<p>72. The architecture of claim 70,</p> <p>wherein the real-time application program</p> <p>forms a voice conference and connects one of</p> <p>the users to the voice conference.</p>	<p>Col. 9, line 43</p>
<p>73. The architecture of claim 70,</p> <p>wherein the real-time application program</p> <p>connects one of the users to an existing voice</p> <p>conference.</p>	<p>Col. 9, line 44</p>
<p>74. The architecture of claim 70,</p> <p>wherein the real-time application program</p> <p>forms a voice conference and enables</p> <p>manipulation of a parameter of the voice</p> <p>conference.</p>	<p>Col. 9, line 45</p>
<p>75. The architecture of claim 70,</p> <p>wherein the real-time application program</p>	<p>Col. 9, line 46</p>

forms a voice conference and enables movement of one of the users from the voice conference to another voice conference.	
76. The architecture of claim 70, further including a telephone network communicating the user's voice stream.	Col. 8, line 31; Col. 8, line 65; Fig. 7
77. The architecture of claim 70, wherein the real time application sends data with the voice.	Col. 8, line 31
78. A computer system architecture for processing an application, the architecture including:  a front end server;  a plurality of dedicated processors structured so that the front end server can communicate with at least one of the plurality of dedicated processors; and  a cellular telephone communication from one of a plurality of users to the front end server to enable the dedicated processor to execute the application and facilitate communication between the one user and another of the users.	Claim 1     Claim 1   Claim 1     Col. 10, line 38  Abstract, line 12

79. The architecture of claim 78, wherein the cellular telephone communication includes a communication of voice between the one user and another of the users.	Claim 1  Abstract, line 12;
80. The architecture of claim 78, wherein the cellular telephone communication includes a communication of data between the one user and another of the users.	Col. 8, line 31
81. The architecture of claim 78, wherein the cellular telephone communication includes a communication of voice and data between the one user and another of the users.	Col. 8, line 31
82. The architecture of claim 78, wherein the cellular telephone communication includes a chat room discussion.	Col. 9, line 37; Col. 10, line 38
83. A computer system architecture for processing an application, the architecture including:  a front end server;  a plurality of dedicated processors structured so that the front end server can communicate with at least one of the plurality of dedicated processors;	Claim 1      Claim 1   Claim 1

<p>a cellular telephone communication</p> <p>from one of a plurality of users to the front end</p> <p>server to enable one of the dedicated</p> <p>processors to execute the application and</p> <p>communicate with the user.</p>	<p>Col. 10, line 38</p>
<p>84. The architecture of claim 83,</p> <p>wherein the cellular telephone communication</p> <p>enables accessing the world wide web.</p>	<p>Abstract, line 12</p>
<p>85. The architecture of claim 83,</p> <p>wherein the cellular telephone communication</p> <p>enables communicating via the Internet.</p>	<p>Col. 9, line 38; Col. 10, line 38</p>
<p>86. The method of claim 83, the</p> <p>application program is a game application.</p>	<p>Col. 10, line 39; Col. 10, line 38</p>
<p>87. The method of claim 86, wherein</p> <p>the game application includes more than one</p> <p>user.</p>	<p>Col. 11, line 37</p>
<p>88. A computer system architecture</p> <p>processing an application, the architecture:</p> <p>    a front end server;</p> <p>    a plurality of dedicated processors</p> <p>structured so that the front end server can</p> <p>communicate with at least one of the plurality</p> <p>of dedicated processors;</p>	<p>Col. 11, line 38</p> <p>Claim 1</p> <p>Claim 1</p>

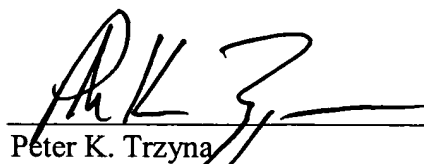
<p>a connection between two users via the Internet and via the front-end server to initiate communication with the dedicated processor;</p> <p>a game application program executed on the dedicated processor to enable the users to play the game with each other while suspending communication between one of the users and the front end server.</p>	<p>Claim 1</p> <p>Col. 11, line 4; Col. 10, line 39</p> <p>Claim 1</p> <p>Col. 11, line 37</p>
<p>89. A computer system architecture for processing an application, the architecture including:</p> <p>a front end server;</p> <p>a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p>a connection formed between two users via the Internet and with at least one of the users via the front-end server to initiate communication with the dedicated processor;</p> <p>a game application program executed on more than one of the dedicated processors</p>	<p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 11, line 4; Col. 10, line 39</p> <p>Claim 1</p> <p>Col. 11, line 37</p>



to enable the users to play the game with each other.	
<p>90. A computer system architecture for processing an application, the architecture including:</p> <p style="padding-left: 40px;">a front end server;</p> <p style="padding-left: 40px;">a plurality of dedicated processors so that the front end server can communicate with at least one of the plurality of dedicated processors;</p> <p style="padding-left: 40px;">a cellular telephone communication from one of a plurality of users to the front end server to enable one of the dedicated processors to execute a game application program on the dedicated processor to enable the users to play the game with each other.</p>	<p>Col. 11, line 39</p> <p>Claim 1</p> <p>Claim 1</p> <p>Claim 1</p> <p>Col. 10, line 38</p> <p>Abstract, line 12</p> <p>Col. 11, line 37</p>
<p>91. The architecture of any one of claims 80 through 90, wherein the application program is a real-time application program.</p>	<p>Claim 1</p>

Dated: April 9, 2004

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'PK Trzyna', written over a horizontal line.

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